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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/528,121

03/16/2005

Puhua Zhang

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09/01/2009

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EXAMINER

MENDEZ, ZULMARIAM

ART UNIT

PAPER NUMBER

1795

NOTIFICATION DATE

DELIVERY MODE

09/01/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patents@bakerlaw.com

Office Action Summary	Application No. 10/528,121	Applicant(s) ZHANG, PUHUA	
	Examiner ZULMARIAM MENDEZ	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masselin (FR 2284665) in view of Hideaki (EP 0846847).

With regard to claims 1 and 3, Masselin discloses a method for preparation and treatment of a liquid or gas fluid (page 1, lines 1-3), comprising mixing water with ethanol in a certain ratio by weight (page 1, lines 9-14, 18-20; page 2, lines 17-21), heating and evaporating the obtained mixture to obtain a vapor mixture (page 1, lines 18-23; page 2, lines 26-28) and passing the said vapor mixture through an electric field of 1 to 15KV (page 1, lines 20-21; page 2, lines 30-32; page 3, lines 2-3) but fails to explicitly disclose wherein such electric field is a DC electric field.

Hideaki discloses treating a mixture of water and ethanol with a direct current electric field ranging from 6KV to 15KV (page 3, lines 18-21) for charging the gas mixture and improve engine efficiency. Therefore, one having ordinary skill in the art at the time of the invention, would have found it obvious to use a DC electric field, as taught by Hideaki in the process of Masselin in order to charge the gas mixture and improve engine efficiency.

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Masselin in view of Hideaki, as applied to claim 1 above, and further in view of Davis et al. (US Patent no. 4,565,548).

With regard to claim 2, Masselin in view of Hideaki discloses all of the process steps, as applied to claim 1 above, wherein the mixture of water with ethanol is made in predetermined proportions but fails to explicitly teach that such ratio is of 4:1 to 1:1 by weight.

Davis discloses a fuel composition produced by a mixture of an alcohol, such as ethanol in the amount of about 2 to 10 volume % (~0.1578 to 7.89 wt%) and about 0.01 to 0.5 wt % of water (col. 2, lines 42-46, 53-55) in order to provide a clear stable alcohol-water fuel composition. therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to use a predetermined mixture of water and ethanol, as taught by Davis, in the process of Masselin in view of Hideaki in order to provide a clear stable alcohol-water fuel composition.

Response to Arguments

5. Applicant's arguments filed on May 4, 2009 have been fully considered but they are not persuasive. The applicant argues that none of the references teaches the electrolysis of the mixture comprising ethanol and water to produce fuel and that the Prior Art of record, in comparison to the present invention, have a different design and technical solutions.

In response, the examiner does not find this arguments persuasive because the primary reference, Masselin (FR 2284665) teaches a method and device to electrolyze a mixture of water and an alcohol, ethanol, to provide the electrolysis product as a feed to a subsequent apparatus, such as an internal combustion engine (page 1, first paragraph). Therefore, the method disclosed by Masselin is capable to convert water into fuel. In addition, the teachings of Hideaki have been presented to show that it is well known in the art to also treat a mixture of water and ethanol with a DC electric field during electrolysis to charge the mixture and improve the efficiency of the device. Furthermore, it should be noted that a preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). In claim 1, the intended use of a method for converting water into fuel is not given patentable weight.

Conclusion

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6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

7. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **ZULMARIAM MENDEZ** whose telephone number is (571)272-9805. The examiner can normally be reached on Monday-Friday from 9am to 5pm.

9. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer Michener can be reached on 571-272-1424. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Harry D Wilkins, III/
Primary Examiner, Art Unit 1795

/Z. M./
Examiner, Art Unit 1795